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CLAIMS

(83)

Sub  
A1

1. An apparatus (1) for measuring a volume of a  
5 quantity of a liquid, for example, in connection with a  
medical diagnostic test, comprising at least one chamber  
(2) for receiving the liquid, which chamber (2) comprises  
a bottom (3) and upright side walls (4) and at least two  
electrodes (5) to connect to a voltage source and to a  
10 measuring system for determining the electrical impedance  
between the electrodes, characterized in that the elec-  
trodes are incorporated in the bottom (3) of the chamber  
(2), allowing the electrical impedance of the liquid it-  
self to be determined.
- 15 2. An apparatus according to claim 1, character-  
ized in that the bottom (3) of the chamber (2) is substan-  
tially formed by a glass substrate (9).
3. An apparatus according to claim 2, character-  
ized in that the electrodes (5) are provided on the glass  
20 substrate (9), and are embedded in an insulation layer  
(10) provided on the glass substrate (9).
4. An apparatus according to the claim 3, charac-  
terized in that the upright side walls (4) are formed by  
etching insulation material provided on the insulation  
25 layer (10).
5. An apparatus according to claim 1, character-  
ized in that the bottom (3) of the chamber (2) is substan-  
tially formed by a silicon wafer (6).
6. An apparatus according to claim 5, character-  
30 ized in that the silicon wafer (6) is provided with a  
first insulation layer (7), preferably of  $\text{SiO}_2$ .
7. An apparatus according to claim 6, character-  
ized in that the electrodes (5) are provided on the first  
insulation layer (7) of the silicon wafer (6) and are em-  
35 bedded in a second insulation layer (8), preferably  $\text{Si}_3\text{N}_4$ ,  
which is provided on the first insulation layer (7).
8. An apparatus according to claim 7, character-  
ized in that the upright side walls (4) are formed by

etching insulation material provided on the second insulation layer (8)

9. An apparatus according to one of the preceding claims, characterized in that the volume of chamber (2) is maximally 2 nanolitres.

10. An apparatus according to any one of the claims 1-9, characterized in that the same comprises a plurality of chambers (2) arranged in an array.

11. An apparatus for measuring a quantity of liquid according to one of the preceding claims, characterized in that it is connected to an alternating voltage source having a frequency of at least approximately 15 kHz.

ADD  
A2